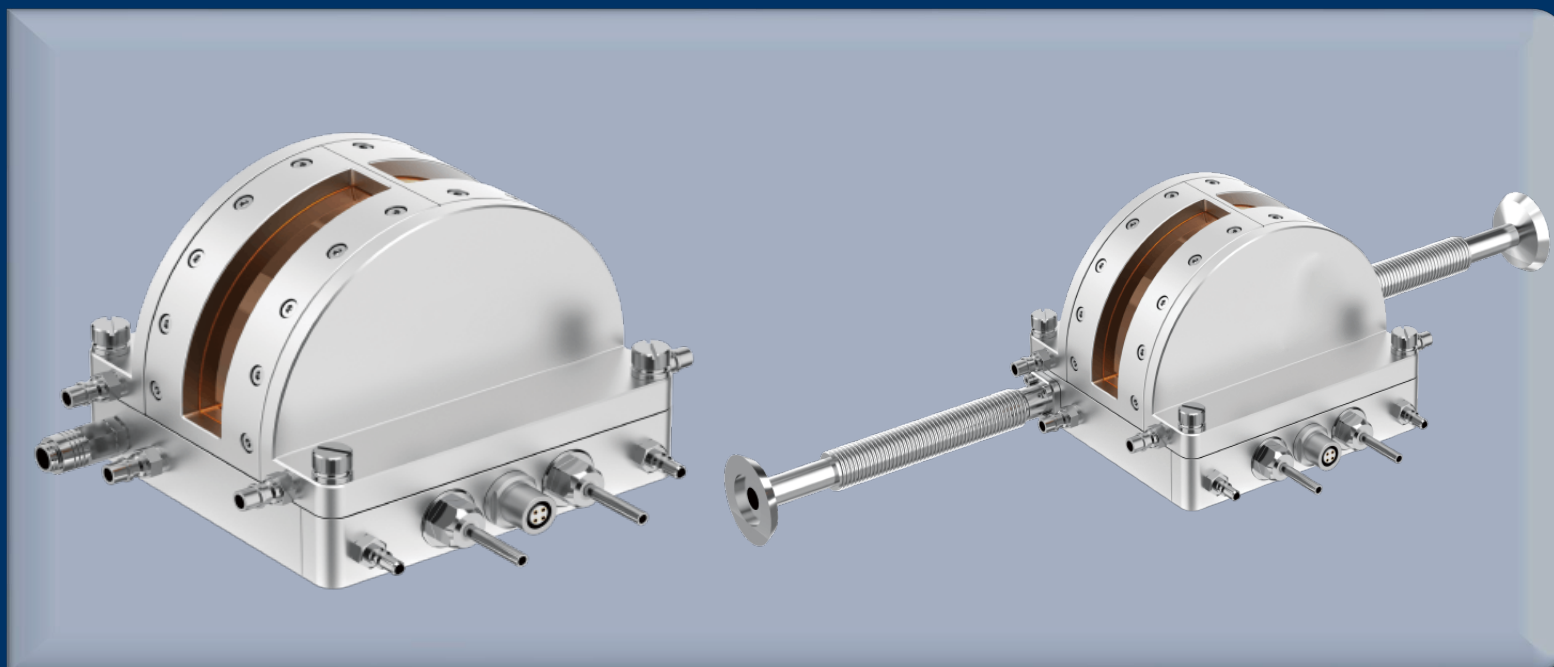


# Special Applications

## XRDThermo Stage

Equipment used with X-ray diffractometers (XRD)

- Wide temperature range regulation
- Precise and stable temperature control
- In-situ testing function
- Good radiation transmittance



One Platform Many Possibilities

Contact Us [sales@venuslabtech.com](mailto:sales@venuslabtech.com)

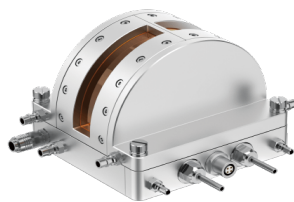
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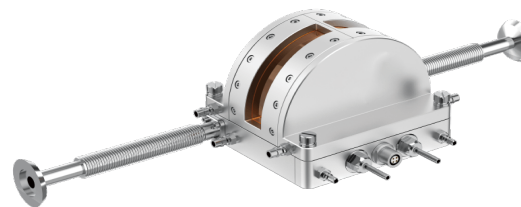
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VLS-190-600



VLS-190-400V

## Overview

### Introduction to XRDThermo Stage :

This device adopts advanced temperature control technology, supporting precise temperature control from low to high temperatures, and featuring excellent temperature stability and uniformity. Its modular design allows it to be easily adapted to various XRD systems, supports atmosphere control and vacuum environments, and meets different research needs. The XRDThermo Stage is equipped with a highly transparent window, ensuring high X-ray transmittance and the quality of diffraction signals. At the same time, it adopts a stable sample stage structure to ensure positional accuracy during the testing process. Combined with professional control software, it can realize the automatic operation of temperature programs and synchronous data recording, and is widely used in phase transition research, thermal expansion coefficient measurement, and temperature-dependent structural analysis in fields such as metals, ceramics, thin films, polymers, and battery materials.

## Specifications

### Same parameters

Parameter	Description
Cooling and heating method	Liquid nitrogen refrigeration, resistance heating
Temperature range	-130 ~600
Temperature stability	±0.1
Temperature control rate	Maximum heating rate: 100 /min, maximum cooling rate: 40 /min
Window material	JGS2 quartz glass (transmission band range 220nm~2500nm), can be manually disassembled and replaced
Chamber	Atmosphere

## Application

- **Phase Transition Study:**

Real-time observation of crystal structure changes, melting, and solidification.

- **Thermal Expansion & Lattice Parameters:**

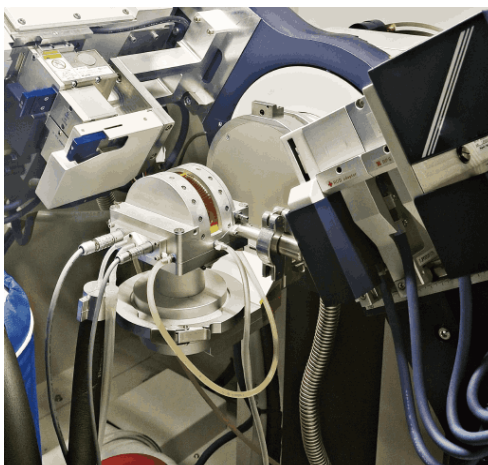
Measurement of thermal expansion coefficient and lattice deformation.

- **Crystallization Kinetics:**

Reaction rate study with rapid heating/cooling (up to 100°C/min).

- **High-Temperature Stability:**

Material durability and reaction testing under extreme heat (up to 1500°C).



## Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

### 1. Warranty Policy

#### Quality First, Worry-Free Operation

**Warranty Period:** We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

**Coverage:** We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

**Rapid Response:** Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

### 2. Technical Support

#### Expert Team, Full-Process Guidance

**Technical Consultation:** Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

**Scheduled Maintenance:** We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

**Training Services:** We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

### 3. Logistics & Delivery

#### Precision Packaging, Global Reach

**Professional Packaging:** Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

**Logistics Partners:** We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

**Shipping Insurance:** All shipments are fully insured to eliminate logistics risks.

### 4. Compliance & Certification

#### Strict Standards, Total Compliance


**Quality Certification:** Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such

as **CE and RoHS**.

**Export Compliance:** "Committed to environmental responsibility, all our products comply with **RoHS 2.0 and REACH standards**, ensuring safety and global compliance."

## Explore Series

Model	Net Weight	Overall Dimensions	Temperature Control Rate	Sample Stage
VLS-190-600	1kg	96mm×70mm×30mm	Maximum heating rate 100°C/min, maximum cooling rate 40°C/min	Brass; 30mm×25mm
VLS-190-400V	2kg	160mm×143mm×83mm	Maximum heating rate 100°C/min, maximum cooling rate 40°C/min	Copper; 30mm×50mm

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

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